Environment Report 2008

SaskPower

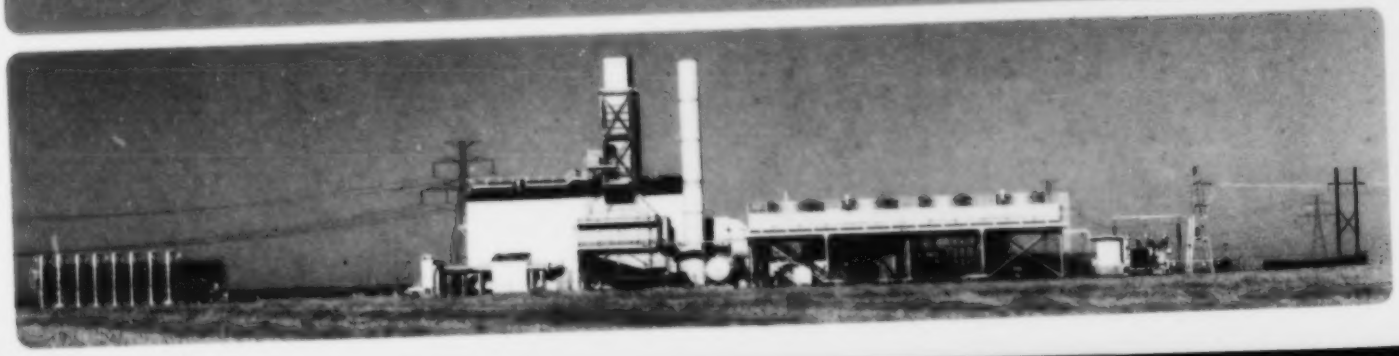
Powering the future

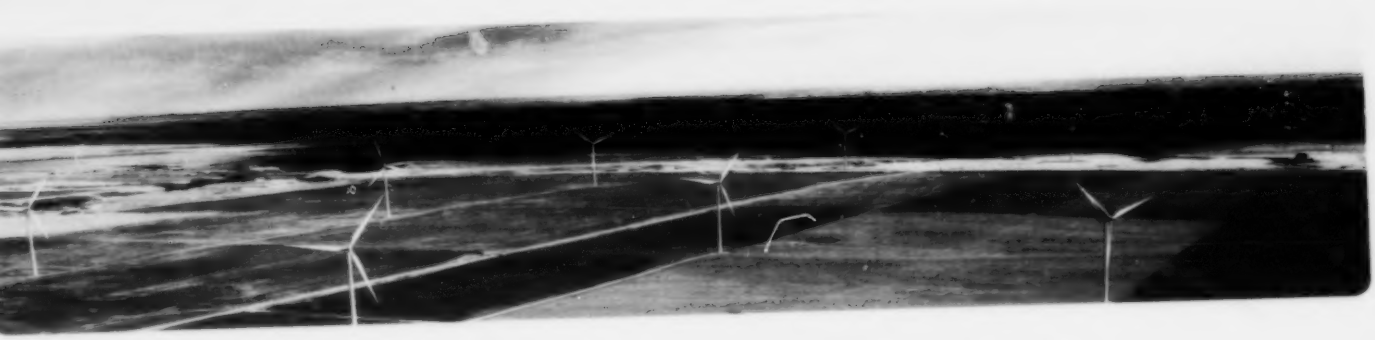
In 2008, our company joined NRGreen Power to introduce three additional waste heat recovery units to our system.

Four facilities now generate 20 megawatts using waste heat exhaust at Alliance Pipeline natural gas compressor stations in a process that creates no new emissions.

At SaskPower, our work with NRGreen is just one example of how we see partnerships generating environmental results.

On the cover: Tim Dacey, General Manager Pipeline Operations, Alliance Pipeline, and Jaimit Jani, Engineer, Regional Network Development, SaskPower.





2008 highlights

- SaskPower Emissions Control Research Facility, which has established a mercury capture rate of up to 75%, receives national environmental stewardship award.
- Environmental Screening System processes unprecedented number of projects – 851.
- Three 5-MW waste heat recovery units commissioned in partnership with NRGreen Power.
- SaskPower leads provincial government, federal government and industry alliance investigating potential development of one of the world's first and largest fully integrated carbon capture and sequestration projects.
- Red Lily Wind Power Limited Partnership 25-MW power purchase agreement finalized, with commissioning expected in 2011.
- Wind Power Integration and Development Unit formed and coordinates Saskatchewan Wind Data Study to provide information for development of a Wind Power Deployment Strategy to be released in spring/summer 2009.
- New emissions mitigation plan in development.
- Establishment of Hydroelectric Development Unit underway.
- Major upgrade of Poplar River Power Station Unit #1 results in efficiency improvements.
- Groundbreaking national fish and fish habitat protocol agreement 2007-2008 action plan completed.
- Geothermal and Self-generated Renewable Power Loan Program introduced.
- Funding for Energy Efficiency for New Homes Rebate Program and Net Metering Program enhanced.
- Over 200,000 compact fluorescent light bulbs distributed across Saskatchewan with assistance of community volunteers, resulting in an estimated 6-MW decrease in demand.
- Seasonal LED Exchange Program sees over 24,000 old inefficient incandescent light strings collected.
- SaskPower Shand Greenhouse reaches lifetime distribution mark of over six million seedlings and receives United Nations sustainability award for education programming.

We invite you to learn more about our company by visiting our website at saskpower.com.

Corporate profile

As the principal supplier of electricity in Saskatchewan, SaskPower serves more than 460,000 customers and manages $4.5 billion in assets. We have a team of over 2,500 permanent full-time employees located in 71 communities.

Our company operates three coal-fired power stations, seven hydroelectric stations, four natural gas stations and two wind facilities with an aggregate generating capacity of 3,172 megawatts (MW). SaskPower also has purchase agreements with the Meridian Cogeneration Station, Cory Cogeneration Station, SunBridge Wind Power Project and NRGreen Kerrobert, Loreburn, Estlin, and Alameda Heat Recovery Projects. Total available generation capacity is 3,641 MW.

SaskPower maintains more than 156,000 kilometres of power lines, 52 high voltage switching stations and 182 distribution substations. We also operate three wholly owned subsidiaries – NorthPoint Energy Solutions, SaskPower International and SaskPower Shand Greenhouse.

Strategic direction

Vision

People, innovation and partnerships... powering Saskatchewan to a bright future.

Mission

Safe, reliable and sustainable power for our customers.

Values

Responsive, respectful, progressive and accountable in everything we say, do and offer.

Priorities

1. Proud and productive employees.
2. Loyal and satisfied customers.
3. Dependable and secure infrastructure.
4. Strong environmental stewardship and performance.
5. Prudent financial management and growth.

Operating statistics

Available generating capacity (net MW)

	2008	2007	2006	2005	2004
Coal	1,682	1,661	1,661	1,651	1,651
Gas	913	976	976	976	976
Hydro	854	854	854	854	854
Wind	172	172	172	22	22
Other	20	5	5	–	–
	3,641	**3,668**	**3,668**	**3,503**	**3,503**

Net electricity supplied (MWh)

	2008	2007	2006	2005	2004
Coal	11,405	11,661	11,102	11,467	12,191
Gas	3,812	3,545	3,556	3,234	3,729
Hydro	4,030	4,393	4,032	4,573	2,746
Wind	574	620	573	92	74
Imports	587	316	451	481	960
Other	72	36	–	–	–
Gross electricity supplied	**20,480**	**20,571**	**19,714**	**19,847**	**19,700**
Line losses	**(1,879)**	**(1,797)**	**(1,834)**	**(1,666)**	**(1,804)**
Net electricity supplied	**18,601**	**18,774**	**17,880**	**18,181**	**17,896**

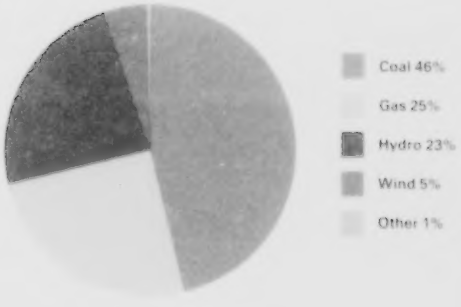
Lines in service (km)

	2008	2007	2006	2005	2004
Transmission lines	12,311	12,216	12,212	12,159	12,149
Distribution lines	144,350	143,602	142,843	142,110	141,408
	156,661	**155,818**	**155,055**	**154,269**	**153,557**

Peak loads (net MW)

	2008	2007	2006	2005	2004
Annual peak load	3,194	2,969	2,960	2,946	2,954

2008 available generating capacity – 3,641 MW



Environmental Policy

SaskPower demonstrates environmental leadership through prudent use of natural resources, now and into the future. We have adopted the following principles to help safeguard our air, land and water resources:

1. Compliance with relevant environmental legislation, regulations and corporate environmental commitments.
2. Prevention of pollution.
3. Continual improvement of our environmental management systems and environmental performance.

In support of these principles, SaskPower employees and those working on our behalf will:

- Manage all significant environmental aspects associated with our operations and services.
- Establish and maintain environmental objectives and targets.
- Integrate environmental considerations into corporate decision-making processes.
- Audit our environmental performance regularly, including audits for conformance with ISO 14001 Standard for Environmental Management Systems.
- Ensure employees and contractors know and fulfill their environmental roles and responsibilities.
- Avoid, reduce or control emissions or discharges which may adversely affect the environment.
- Conserve resources through efficient use and implement the fundamentals of waste management: rethink, reduce, reuse, recycle and recover.
- Communicate actively, transparently and effectively with shareholders, employees, contractors, suppliers, customers, regulators and the public on environmental issues.

A letter to our stakeholders

From one generation to the next

At SaskPower, we began producing an Environment Report in 1993. The move signified our desire to strengthen SaskPower's focus on environmental issues while bolstering our level of acountability with stakeholders and customers. Since that time, much has changed. Regulatory standards have evolved and societal expectations have heightened.

As a community, we've come to better understand climate change and a range of other environmental challenges that come about through the production of electricity and that need to be addressed aggressively. For SaskPower, this means we must consistently re-dedicate ourselves to a leadership role within our province by lessening the environmental footprint of our operations while simultaneously helping customers use our product – electricity – more efficiently.

Within the past few years Saskatchewan has experienced extraordinary economic growth. In 2008, our company set new marks on a number of fronts: record service applications, record customer connects and record peak load.

For SaskPower, this raises the stakes even higher. It means that as our company seeks to maintain security of supply and financial stability, we must also meet ambitious new environmental targets and become better environmental stewards.

A strategy for sustainability

We believe that any improvement in our environmental performance begins with planning. During the year, our company unveiled a new Strategic Plan with five Strategic Priorities, one of which highlights a fundamental component of SaskPower's operational responsibility: "Strong environmental stewardship and performance." Planning must lead to action and results, so we're tracking our progress in addressing our Strategic Priorities through a new Corporate Balanced Scorecard and yearly targets.

For the past decade, SaskPower has also publicly reported on its environmental performance as part of the Canadian Electricity Association's Environmental Commitment and Responsibility Program (ECRP). Recognizing the need to further focus member utilities' attention on sustainable development, the ECRP is being replaced by a new initiative in the coming year – the Sustainable Electricity (SE) program. It has a comprehensive set of indicators that include social, economic and environmental measures.

We believe that transparency and candid discussions about environmental issues will help guide our future actions and bring us closer to all of our stakeholders. To that end, we are pleased to note that in 2010 this document will be replaced with a Sustainability Report that will include SE program indicators. We're confident that by adding social and economic measures alongside environmental reporting, we'll develop a fuller picture of our challenges and will be better able to identify the advancements we require.

Our performance

SaskPower is on the cusp of major change. Much of our infrastructure is at the end of its life cycle, and load is expected to increase by approximately 40% in the next 10 years. As a result, our company is entering an intense period of renewal that will see the need to replace and build or acquire approximately 1,700 megawatts (MW) by 2020, with a total of 3,300 MW required by 2030. We see this as an opportunity – one which can assist us in making sustainability a true part of our core business.

As a company that presently relies heavily on coal-fired generation, emissions are and will remain our main challenge as we enter this period of revitalization. With a projected $8-billion in capital expenditures in the next 10 years, we are committed to introducing cleaner sources of energy and steadily transforming SaskPower into a more sustainable company. We are also dedicated to supporting the Government of Saskatchewan's Go

"We believe that transparency and candid discussions about environmental issues will help guide our future actions and bring us closer to all of our stakeholders."

Green Program and the provincial target of reducing greenhouse gas emission levels.

Present and future success will rely heavily on partnerships with all stakeholders – the private and public sectors as well as our customers. We will seek to leverage collaboration to provide access to cutting-edge technologies and expertise, enhance our financial capacity, facilitate risk sharing and reduce energy use.

In 2008, our work with NRGreen Power was an example of the benefits that partnerships can deliver. It led to the addition of three 5-MW waste heat recovery units to our system that produce electricity without any new emissions. Meanwhile, through our new Wind Power Integration and Development Unit, we are partnering with developers to participate in the Saskatchewan Wind Data Study that will inform a Wind Power Deployment Strategy. And ongoing discussions with First Nations in Northern Saskatchewan could lead to the further development of a significant renewable energy source – hydroelectricity.

During the year, staff at our Emissions Control Research Facility continued to work with agencies and utilities from across North America and were recognized with the Canadian Electricity Association's Environmental Stewardship Award for their advancements in mercury emissions technology. Research is also at the centre of our partnership with the provincial government, federal government and industry on the potential development of one of the first and largest fully integrated carbon capture and sequestration demonstration projects in the world.

When it comes to partnerships with customers, we have committed to reduce demand by 100 MW by 2017 through the SaskPower Eneraction Demand Side Management program. In 2008, we introduced the Geothermal and Self-generated Renewable Power Loan Program, while enhancing funding for the Energy Efficiency for New Homes Rebate Program and Net Metering Program. Education and awareness are also critical. By working with volunteers, we were able to distribute over 200,000 compact fluorescent light bulbs across Saskatchewan. And the Shand Greenhouse's Energy and Our Environment classroom program continued to reach youth and was recognized with a United Nations sustainability award.

Looking ahead

As we move forward in determining Saskatchewan's energy future, we know that planning, partnerships and continuous improvement will all play fundamental roles as we further sustainability within our company and province. We also recognize that progress will only be achieved with clear measurable objectives in place and a course of action that effectively balances the needs of our company and customers with those of the environment.

As always, we encourage you to provide feedback and to tell us how we can make more of a difference. We are committed and determined. And as partners, we are in this together.

Pat Youzwa
President and Chief Executive Officer

Grant McGrath
Chair
Environment, Occupational Health and Safety Committee
Board of Directors

Environmental framework and reporting

Structure

Governance

At SaskPower, the electricity we produce is essential to the social well-being and economic prosperity of Saskatchewan. However, energy production and use is at the forefront of a host of environmental challenges facing not only our province and country, but the entire planet. As a result, our company is committed to maintaining a program of continuous environmental improvement. From goal-setting and reporting to performance measurement and stakeholder relations, our approach must begin and end with accountability.

SaskPower is a Crown corporation and governed by *The Power Corporation Act*. It is subject to the provisions of *The Crown Corporations Act, 1993*, which gives the Crown Investments Corporation (CIC) of Saskatchewan, the holding company for Saskatchewan's commercial Crown corporations, broad authority of SaskPower.

Our company's Board of Directors is responsible for the general stewardship of SaskPower. The Board is accountable to the Minister of Crown Corporations, who functions as a link between SaskPower and cabinet, as well as the provincial legislature. The Board is accountable for setting direction, monitoring and evaluating achievement, as well as overseeing any necessary corrective action. The Board works with management to develop and approve SaskPower's Strategic Plan, annual budget and Business Plan.

Our company's Board has standing committees to assist in discharging specific areas of responsibility. The Environment, Occupational Health and Safety Committee is charged with ensuring that our company proactively addresses safety, health and environmental issues and is in compliance with regulatory requirements.

SaskPower's strategic direction guides the daily and long-term activities of the company and each employee. In 2008, the strategic direction was revised to reflect our company's current challenges and operating environment. As a result, one of five new Strategic Priorities emphasizes our commitment to better protecting the ecosystem: "Strong environmental stewardship and performance." Meanwhile, partnerships has been added to people and innovation as a key ingredient in meeting our long-term vision: "People, innovation and partnerships...powering Saskatchewan to a bright future."

Environmental Policy

Our company's commitment to comply with applicable legal requirements while pursuing continuous improvement is outlined in SaskPower's Environmental Policy. Specific objectives and targets are set based on the principles contained within the policy. As required by our Environmental Management System (EMS), the policy is reviewed each year. The core principles within the Environmental Policy are:

1. Compliance with relevant environmental legislation, regulations and corporate environmental commitments;
2. Prevention of pollution; and
3. Continual improvement of environmental management systems and environmental performance.

The complete policy can be reviewed on page four.

Environmental Management System (EMS)

SaskPower maintains an ISO 14001-registered EMS. The EMS provides our company, employees and contractors with a structure designed to promote continuous environmental improvement. The set of demanding measures that directs our EMS is established

by the International Organization for Standardization (ISO) – a non-governmental, worldwide federation of national standards bodies from 140 countries that works in partnership with international organizations, governments, industry, as well as business and consumer representatives.

Since implementation in 2000, SaskPower has maintained eight ISO 14001 registrations through annual independent EMS audits conducted at facilities across the province. Annual internal EMS audits are also conducted by qualified SaskPower personnel.

Our EMS helps us identify, monitor and manage the impact of our business on air, land and water. We track our progress by setting specific objectives and targets that are based on regulatory, technological and financial considerations. We also take into consideration the views of customers, communities and environmental agencies. SaskPower has a comprehensive environmental awareness training program to help ensure that all employees and contractors understand their roles, responsibilities and our EMS. All new employees complete this training, and all employees must renew training every three years.

Stakeholder engagement and communication

SaskPower consults with a wide variety of stakeholders on a diverse range of environmental issues. When we are beginning work to construct a new facility or improve an existing one, public consultation is central to our efforts. Our programs typically include early contact with local officials; distribution of detailed project information; open house sessions; meetings with individuals, First Nations and interest groups; media releases, advertisements, and direct correspondence; and discussion. Results of public participation programs are frequently included in project application and approval processes that are filed with regulators. SaskPower also tracks external inquiries in our Environmental Management System (EMS).

Outside of our formal public consultation process, SaskPower maintains ongoing dialogue with a wide variety of key stakeholders, including: Saskatchewan Ministry of Environment; Saskatchewan Ministry of Energy and Resources; Fisheries and Oceans Canada (DFO); and the Canadian Electricity Association (CEA). In addition, we communicate with stakeholders in centres where we conduct operations.

All new SaskPower employees must complete environmental awareness training, which each employee must renew every three years.

Reporting

Overview

Reporting is central to our cycle of continuous improvement:

- We report annually to our customers, shareholder and stakeholders through this Environment Report.
- We file an annual Environmental Commitment and Responsibility Program (ECRP) report with the Canadian Electricity Association (CEA).
- We report annual greenhouse gas (GHG) emissions and bi-annual corporate environmental expenditures to Statistics Canada.
- We report annually to Environment Canada's National Pollutant Release Inventory (NPRI), as well as provide information on air pollutants, GHGs and other substances.

SaskPower is a founding member of the CEA's ECRP, which was established by CEA utility members in 1997 to demonstrate the electricity industry's commitment to improving environmental performance. The ECRP report has provided an annual summary of work being done throughout the industry to address environmental challenges. The report included details on initiatives undertaken by member organizations, as well as annual combined utility indicator data.

However, recognizing the challenges inherent in reducing the industry's overall environmental footprint while enhancing the social and economic aspects of operations, the CEA's Board of Directors has directed the organization to transform the ECRP into a sustainability initiative – the Sustainable Electricity program.

Canadian Electricity Association's (CEA) Sustainable Electricity (SE) program

The CEA recently launched the SE program with SaskPower President and Chief Executive Officer Pat Youzwa as Chair. The SE program is based on the internationally recognized concept of sustainable development (SD), which the CEA defines as, "pursuing innovative business strategies and activities that meet the needs of members, stakeholders and the communities in which we operate today, while protecting and enhancing the human and natural resources that will be needed in the future."

As stipulated in the Sustainable Development–Corporate Responsibility Policy, all CEA corporate utility members are committed to improving their overall sustainable development performance. Four elements are included in the SE program:

1. Sustainable development policy: Utility members commit to 10 key guiding principles, which form the basis of the program.
2. Performance indicators and reporting: Each of the program principles is supported by indicators that will track overall industry sustainable development performance. Utilities will report on these key indicators and overall industry results will be published in an annual report to stakeholders.
3. Public advisory panel: The panel will include distinguished and qualified Canadians and will provide independent opinion and advice to the CEA Board of Directors on the implementation of, and improvements to, the program.
4. External verification: The implementation of the program will be verified by an independent external verifier.

SE program principles

The SE program has a set of SD principles that are relevant to the Canadian electricity industry and the CEA's corporate utility members. The principles and core elements of the SE program were also reviewed by the Sustainable Electricity Executive Council, with input from the Public Advisory Panel, and submitted to the CEA Board of Directors.

- Environment: Minimize the adverse environmental impacts of our facilities, operations and businesses.
- Stewardship and biodiversity: Manage the environmental resources and ecosystems that we affect to prevent or minimize loss and support recovery.
- Climate change: Manage GHG emissions to mitigate the impact of operations on climate change, while adapting to its effects.
- Health and safety: Provide a safe and healthy workplace for our employees and contractors.
- Workplace: Support a fair, respectful and diverse workplace for our employees and contractors.
- Communications and engagement: Communicate with and engage our stakeholders in a transparent and timely manner.
- Aboriginal relations: Communicate with and engage Aboriginal people in a manner that respects their culture and traditions.
- Economic value: Provide economic benefits to shareholders, communities and regions in which we operate.
- Energy efficiency: Produce, deliver and use electricity in an efficient manner while promoting conservation and Demand Side Management.
- Security of supply: Provide electricity to customers in a safe, reliable and cost effective manner to meet current and future needs.

To learn more about the SE program, see the website at sustainableelectricity.ca.

SaskPower Environment Report

Beginning with the 2009 reporting year, this document – the SaskPower Environment Report – will be replaced with a SaskPower Sustainability Report that will include SE program indicators. We believe that by adding social and economic measures alongside environmental reporting, we will develop a fuller picture of our challenges and will be better able to identify the advancements we must undertake.

Our business

Energy supply

A changing landscape

For 80 years, SaskPower has provided electricity to the homes, farms and businesses of Saskatchewan – an area of vast plains, parklands, boreal forests, lakes, and rivers contained within 651,036 square kilometres. As we dedicate ourselves to providing our customers with safe and reliable power, we are also striving to strengthen the sustainability of our practices and protect the unique ecosystems within which we operate.

During 2008, SaskPower experienced another year of firsts. New marks were set that reflect the province's steady growth: record peak load, record new service applications, and record customer connects. The global economy has slowed significantly; however, the impact in Saskatchewan has not been as dramatic. In the near term, we may not see the unprecedented demand for power that has taken place over the past couple of years, but demand for power is still growing. In the next 10 years, load is expected to increase by about 40%.

Against the backdrop of continued load growth is the reality that many of our company's facilities were built in the 1950s, 60s, and 70s and are in need of upgrade or replacement. As a result, we are at the beginning of a multi-decade program of infrastructure renewal that will see the need to replace and build or acquire approximately 1,700 megawatts (MW) by 2020, with a total of 3,300 MW required by 2030.

Between 2009 and 2018, we are projecting our company will invest more than $8 billion in the provincial electrical system, compared to $1.6 billion in the last 5 years. With one of the most capital-intensive periods in the company's history ahead, SaskPower is committed to balancing the need to introduce cleaner sources of energy while maintaining security of supply and financial stability.

Such a comprehensive revitalization of our infrastructure represents a significant opportunity to integrate environmentally beneficial technologies while increasing the presence of renewable energy sources in our supply mix. Emissions will be a critical issue for our company as we undertake this renewal. SaskPower also recognizes the central role we must take in supporting the Government of Saskatchewan's Go Green Program, which will address the province's position as holder of the highest rate of growth in GHG emissions in Canada. Partnerships with customers, the private sector and public sector will be necessary to assist in meeting the provincial target for reducing GHG emissions levels.

Current developments

SaskPower is meeting the short-term increase in demand with low- and non-emitting sources of generation. During 2008, SaskPower and NRGreen Power completed construction of three waste heat recovery units at Alliance Pipeline's compressor stations at Loreburn, Alameda and Estlin. One unit was previously commissioned at Kerrobert. Together, the four generate 20 MW – enough power to meet the needs of about 20,000 homes – by using waste heat exhaust in a process that creates no new emissions.

Meanwhile, our company is proceeding with plans for three simple cycle gas turbine facilities. Installation is proceeding on 94 MW of generation at the Ermine Switching Station near Kerrobert and 105 MW at Queen Elizabeth Power Station. Preliminary work is underway for 141 MW at a site near North Battleford. Natural gas-fired turbines will allow SaskPower the time to further develop renewable and emissions management technologies. The units are relatively quick and easy to install, offer operational flexibility and require no long-term fuel obligation. Gas turbines produce up to 50%

172 **Megawatts of wind power currently in service in Saskatchewan.**

less carbon dioxide (CO_2) per megawatt hour (MWh) than conventional coal-fired generation, while emissions of sulphur dioxide (SO_2), particulates and mercury are near-zero. With modern control strategies, emissions of nitrogen oxides (NO_x) will also be reduced. Installing gas turbines also lays the groundwork for SaskPower to be able to add more wind power generation in the future, as this peaking source will be in place to back up wind generation.

In 2008, our company finalized an agreement with Red Lily Wind Power Limited Partnership. SaskPower will purchase wind-generated electricity from a 25-MW facility that will be constructed northwest of Moosomin and operational in 2011. The proposal was selected initially in 2006 under a previous solicitation to partner with Independent Power Producers on projects that do not produce any new GHG emissions.

Meanwhile, a major generation-related refurbishment project was completed during the year at Poplar River Power Station. A $125-million upgrade was concluded on Unit #1, which annually generates 10% of Saskatchewan's electricity and has been in commercial operation since 1983. The rebuild will increase the unit's output, reliability and efficiency while maintaining its viability for another 20 to 25 years.

Future additions

There are opportunities for a wide range of technologies and proponents to help secure and renew the electrical infrastructure of Saskatchewan. An evaluation of numerous options is always underway at SaskPower.

In order to optimize generation and network systems, SaskPower is developing a fully integrated supply and transmission plan. In addition to enhancing Demand Side Management (DSM) programs, future generation sources under consideration include clean coal, polygeneration, cogeneration, natural gas, imports, purchased power, nuclear, large and small hydro, and renewables such as biomass and wind.

Renewables will play an important role in SaskPower's future generation mix. Our company has approximately 172 MW of wind power currently in service. However, we are experiencing grid operating challenges due to wind's inherent variability.

In response, SaskPower has formed the Wind Power Integration and Development Unit (WPIDU) to study and assess the effect of wind power on the provincial system.

The WPIDU has invited developers with experience in wind monitoring in the province to participate in a Saskatchewan Wind Data Study, which will help determine the benefits and feasibility of building future wind facilities in geographically diverse locations. SaskPower will release a Wind Power Deployment Strategy that will address the timing, ownership and procurement process for new wind power projects in the spring/summer of 2009.

SaskPower is also working to establish a Hydroelectric Development Unit to pursue projects under a variety of construction and ownership models. At present, our company is in discussions with First Nations groups and their partners regarding potential developments on the Fond du Lac River and Saskatchewan River.

NRGREEN POWER PARTNERSHIP

Waste not, want not

More than five years ago, SaskPower issued a solicitation to partner with Independent Power Producers to build and operate small-scale generation projects that produce no new greenhouse gas emissions. Today, four NRGreen Power waste heat recovery units at Alliance Pipeline compressor stations in Saskatchewan are generating five megawatts (MW) of electricity each. Located near Kerrobert, Alameda, Loreburn and Estlin, the facilities are producing enough emissions-free power to supply the equivalent of about 20,000 homes.

"It's just a win-win situation," says Doug Opseth, Supervisor of Supply Development with Planning, Environment and Regulatory Affairs at SaskPower. "We get electricity with no carbon emissions and you turn a waste product into something useful."

Using innovative technology developed and manufactured by U.S.-based energy specialist Ormat, the waste heat units recover exhaust heat from natural gas compression and convert it to electricity. The waste heat would otherwise be vented into the atmosphere.

"As the Alliance system operates over 99% of the time, this is a reliable source of energy that is being generated in an environmentally responsible manner," says Murray Birch, President and Chief Executive Officer of NRGreen Power. "Waste heat recovery projects are one cost-effective way to address North America's increasing energy needs, and a more efficient and effective way to operate our facilities."

NRGreen Power and SaskPower have a 20-year power purchase agreement for the electricity generated at each of the four waste heat recovery units. According to Opseth, partnerships allow SaskPower to introduce more environmentally responsible power into Saskatchewan and help the province meet its commitment to reduce greenhouse gas emissions.

"There are a lot of companies that have an interest in participating in electrical generation in the province," says Opseth. "In the case of NRGreen Power, the best part is that we've got a good relationship with a private partner to produce emissions-free electricity."

"We get electricity with no carbon emissions and you turn a waste product into something useful."

Doug Opseth, SaskPower

100 **Targeted savings in megawatts over 10 years through Demand Side Management initiatives, such as the provincial Energy Efficiency for New Homes Rebate Program.**

Demand Side Management (DSM)

SaskPower Eneraction

DSM refers to initiatives undertaken with customers to reduce the demand for electricity or shift demand from peak periods to off-peak times of the day. The goal of DSM is to reduce the total demand for electricity. As a result, there is a reduction in the need for new generating stations and transmission lines. Meanwhile, shifting demand from peak periods can have a similar effect because fewer peaking sources are needed.

At our company, SaskPower Eneraction – a portfolio of energy efficiency, conservation and load management programs – is the umbrella for our DSM programming. In addition to targeting residential customers, SaskPower Eneraction is assisting commercial and industrial customers. Overall, we are targeting to deliver a total 100 MW of savings by 2017.

Energy Performance Contracting (EPC) Program

Our EPC Program is an energy management service that assists commercial and institutional customers in reducing energy-related operating costs through efficiency upgrades. New energy efficient equipment and technical conservation efforts are implemented in existing facilities. The savings from lower electricity, water and natural gas bills are used to offset the retrofit costs.

In 2008, SaskPower signed EPC contracts with Prince Albert Parkland Health Region and Sunrise Health Region. In addition, a new contract was signed with the Saskatchewan Ministry of Government Services. Overall, these new projects are expected to lead to $6.5 million in construction and produce $575,000 in annual energy savings. Since the inception of EPC, service has been provided to 24 projects at schools, hospitals, hotels, office buildings and a variety of government facilities. To date, these projects are saving 25 million kilowatt hours (kWh) per year.

SaskPower and SaskEnergy are key sponsors of the Destination Conservation Saskatchewan (DCS) program. Delivered in schools across the province by the Saskatchewan Environmental Society, DCS is student-driven and activity-based, with an emphasis on environmental awareness and energy conservation. It promotes sustainability by helping schools conserve resources and protect the environment, and is an integral part of SaskPower's EPC Program for Saskatchewan school divisions.

Energy efficiency and geothermal initiatives

In 2008, SaskPower introduced the Residential Geothermal and Renewable Program. It encourages smaller-scale, environmentally responsible generation. Eligible homeowners and farm customers can receive a loan for up to $25,000 for installing a geothermal system, as well as a loan of up to $25,000 for installing a renewable system. Geothermal systems take advantage of the ground's heating and cooling properties to heat or cool entire buildings.

SaskPower has also enhanced funding of the existing provincial Energy Efficiency for New Homes Rebate Program, which provides incentives to Saskatchewan residents who purchase or build a newly constructed energy efficient home that is either ENERGY STAR®-qualified, R-2000-certified or has an EnerGuide for New Homes rating of 80 or above. SaskPower's contribution supports $3,500 for the installation of a CAN/CSA-C448 compliant geothermal system.

SaskPower's Alternative Farm Energy Solar- or Wind-Powered Livestock Water Pumping Program assists producers with the cost of installing renewable energy sources.

Residential Furnace Program

The Residential Furnace Program's goal is to assist SaskPower customers with the installation of a high efficiency furnace/boiler and high efficiency direct current motor to reduce utility costs and use less energy for heating. The program is operated in partnership with SaskEnergy and the SaskEnergy Network Members of heating ventilating and air conditioning (HVAC) contractors, using a prime rate loan program.

Residential lighting

When it comes to applying hands-on solutions to reducing energy use, SaskPower's residential customers are responding well. During the year, our company teamed with 1,100 local volunteers to deliver over 200,000 compact fluorescent light (CFL) bulbs in 110 communities throughout Saskatchewan. The estimated annual effect is: 12,000,000 kWh of energy savings; 9,000 tonnes of greenhouse gas (GHG) reductions; and a 6-MW decrease in demand.

In 2008, SaskPower also operated a Seasonal LED Exchange Program at 33 retail stores, with residents encouraged to bring in old incandescent strings in exchange for a $3 coupon to be used toward energy efficient LED replacements. Over 24,000 old inefficient light strings were collected and 12,000 LED light string coupons distributed. SaskPower Eneraction event staff, along with the retailers, recycled the old light strings. December and January are typically the peak months for power use in Saskatchewan.

Public awareness

Our Power Savings advertising campaigns educate customers about not only residential lighting, but also other ways to save power, manage costs, and help the environment. In March, SaskPower introduced a multimedia advertising campaign to promote the energy savings and environmental benefits of upgrading to ENERGY STAR®-qualified appliances. SaskPower worked with provincial appliance retailers to provide in-store information to help customers learn more about the province's PST rebate and make informed choices when purchasing energy efficient appliances.

On the web, a cost calculator is available at saskpower.com as part of SaskPower's Power Saving Tips and Tools. This service allows customers to understand where their energy dollars are going and to receive information on how to conserve energy, reduce GHG emissions and save money on energy bills. In 2008, SaskPower held two contests to encourage customers to choose paperless billing through the online service MyPower Account. Since launching MyPower Account in 2007, SaskPower has signed up over 24,000 customers and nearly 19,000 have chosen paperless billing.

Customer-based generation

Net Metering Program

In 2008, SaskPower enhanced funding of the province's Net Metering Program. The initiative now offers a maximum $35,000 incentive for residents who wish to participate, with a maximum of $10,000 of the total coming from SaskPower. Net metering allows customers who generate their own electricity to feed excess power back to SaskPower's system and bank credits for up to one year to offset future electricity use. Only environmentally friendly technologies are eligible, and include wind, solar, low-impact hydroelectric, biomass, flare gas and heat recovery.

The program encourages customers to generate up to 100 kilowatts (kW) of their own electricity for the purpose of offsetting power that would otherwise be purchased from our company. In order to accommodate net metering, a bi-directional or net meter is installed by SaskPower. To date, there are 44 net metering participants.

Small Power Producers Policy

SaskPower continues to offer the Small Power Producers Policy. This initiative applies to wind- and solar-powered facilities, as well as other viable generating sources that are a maximum of 100 kW in size. Under the Small Power Producers Policy, SaskPower will purchase excess energy at the marginal price for that electricity.

Water Pumping Incentive Program

The Alternative Farm Energy Solar- or Wind-Powered Livestock Water Pumping Incentive Program offers a grant equal to 50% of the cost above $500, to a maximum of $500, toward the purchase and installation of a solar- or wind-powered water pumping system for farm livestock. This program assists producers who would otherwise have to run power lines to remote wells, dug-outs or streams. In 2008, 222 solar projects were approved with grants totalling $110,216; nine wind projects were approved with grants totalling $4,145.

GreenPower

Purchasing wind-generated electricity

Introduced in 2002, SaskPower GreenPower is an optional electricity product providing customers with the opportunity to support the development of EcoLogo-certified renewable energy in Saskatchewan. GreenPower is supported by individuals, small businesses and large businesses from all parts of the province. The 11-MW SunBridge Wind Power Project and 11-MW Cypress Wind Power Facility supply GreenPower.

With over 1,200 subscribers, customers have now exhausted our GreenPower supply. We have temporarily stopped taking new applications for the program while it is being assessed. We are reviewing a number of renewable supply options to ensure we are able to continue to meet the growing demand for GreenPower.

Our performance

Emissions

Challenges and regulations

With over 60% of our generation capacity fossil-fuel-based, emissions management is currently the leading challenge for SaskPower. Social and regulatory issues will require us to successfully achieve significant carbon dioxide (CO_2), sulphur dioxide (SO_2), nitrogen oxides (NO_x), mercury and particulate matter reductions while we transition our infrastructure to low or non-emitting forms of generation.

As a large emitter of greenhouse gases (GHG), our company will be greatly affected by developing regulations designed to combat climate change in Canada. At the federal level, Environment Canada was expected to release draft regulations by the end of 2008. It was anticipated that the approach would be based on an intensity system that involves a reduction in the amount of GHG emissions per unit of output.

However, with a new adminstration in the United States having proposed a cap and trade policy, it is believed that there is a desire for the Canadian system to align with the American approach. This is fundamentally different from the intensity system that was previously proposed by the Canadian government. Either method will pose significant financial and operational challenges for SaskPower. Proposed regulations will also involve a more aggressive approach to dealing with NO_x, SO_2, particulates, mercury and other air contaminants.

At SaskPower, an emissions mitigation plan is in development and will be adjusted as regulations are formalized. Our company has been developing approaches to a variety of scenarios that assess financial and operational implications. Meanwhile, the provincial government has developed a complementary approach to potential federal actions, with the objective of seeking both alignment and equivalence while retaining provincial oversight. The first step along this line has been the development of the *Climate Change Act* in early 2009. It will provide the necessary legislative authority to create the provincial regulatory system for GHG emissions regulation. Negotiations with the federal government are ongoing.

Carbon capture and sequestration

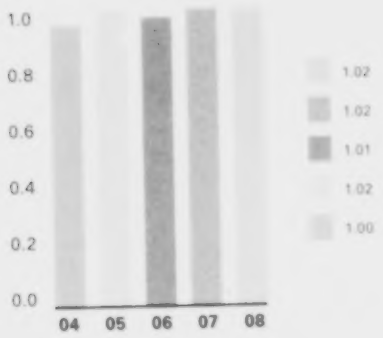
In 2008, SaskPower refocused its efforts on identifying environmentally and economically viable paths forward for its coal-fired generating fleet. In particular, a new initiative – the Boundary Dam Integrated Carbon Capture and Sequestration Demonstration Project – began. This project is focused on the retrofit of post-combustion CO_2 capture technology on Boundary Dam Unit #3. This unit was originally commissioned in 1969 and will be at the end of its current design life in 2013.

The project consists of three major components:

1. Life extension of an existing 150-MW unit to allow for another 30 years of operation.
2. Installation of emissions control equipment and efficiency upgrades.
3. The retrofit of a one-million-tonne-per-year CO_2 capture system.

The in-service date is targeted for the end of 2013. It will be integrated with a one-million-tonne-per-year CO_2 flood enhanced oil recovery project. The Government of Canada has provided $240 million in funding to the Government of Saskatchewan to be used for the development of commercial-scale CO_2 capture from a coal-fired electricity generating unit. A significant portion of this funding is being made available to the Boundary Dam Integrated Carbon Capture and Sequestration Demonstration Project.

By the end of 2008, SaskPower approved the critical path engineering and advance procurement. A technology selection process was also initiated during the year and is expected to be completed by the end of 2009. A project budget will be finalized by the end of 2010, along with any necessary environmental approvals and a final decision whether to proceed with the project.



Mercury

Through work conducted at our company's Emissions Control Research Facility (ECRF) at the Poplar River Power Station, SaskPower has developed an innovative solution to meet the requirements of the federal Canada-Wide Standard for mercury emissions, which comes into effect in 2010. In 2008, the ECRF received the Canadian Electricity Association's (CEA) Environmental Commitment and Responsibility Program (ECRP) Environmental Stewardship Award for its work on mercury technologies.

Our company has developed in-house capability for analyzing mercury in coal and ash streams, which has been recognized as being one of the most proficient for this kind of analysis. SaskPower is also acknowledged as one of the most experienced utilities anywhere in using continuous mercury analyzers from our work at the ECRF, which has attracted the involvement of other lignite-burning utilities and suppliers of mercury-control technologies, as well as funding support from agencies in Canada and the United States.

In 2007, full-scale injection of enhanced activated carbon into the electrostatic precipitator (ESP) on Poplar River Unit #2 was started. Based on the success of this work, a permanent mercury control system at both Poplar River units will be operating in 2009.

Key to the success of the work performed at the ECRF has been a strong team of partners. These include the federal government, Saskatchewan universities, the Saskatchewan Research Council, private business, and North American electrical utilities and organizations including the Energy & Environment Research Center (EERC). Throughout 2008, balance-of-plant effects resulting from injection of activated carbon for mercury control at Poplar River Power Station Unit #2 were evaluated.

In the meantime, SaskPower is also offsetting mercury emissions. We are working with Evraz and Wheat City Metals in Regina on a program through which the mercury in automotive switches is captured and recycled before cars are crushed.

- 43.0 kilograms (kg) of mercury were recovered in 2008 (38.5 kg eligible as an offset toward the Canada-Wide Standard for mercury emissions requirement).
- Since inception in 2003, the total mercury recovered through this partnership is 238.4 kg (217.5 kg eligible as an offset toward the Canada-Wide Standard for mercury emissions requirement).

In 2008, our Mercury Thermostat Recycling Program operated for the third year. The initiative ensures the safe collection and recycling of mercury from old household thermostats. Over 850 were picked up for recycling in 2008.

EMISSIONS RESEARCH

Mercury control efforts rewarded

It doesn't look like much to the untrained eye – a few silos and a bunch of pipes located in a warehouse-like structure. But SaskPower's Emissions Control Research Facility (ECRF) near Coronach is home to world-class research. And its success in advancing mercury control efforts has been recognized with the Canadian Electricity Association's Environmental Commitment and Responsibility Program Environmental Stewardship Award.

"We've had many different utilities and organizations approach SaskPower, wanting to work with us and take advantage of the capabilities of the facilities that we have at the ECRF," says Dave Smith, Project Leader of Environmental Initiatives at SaskPower. "I'd say we're right on the forefront of what's going on in mercury control research right now."

Commissioned in 2004, the ECRF was built onto the Poplar River Power Station (PRPS) – a coal-burning facility. Through work at the ECRF, SaskPower has been able to capture and dispose of up to 75% of mercury emissions at the PRPS test unit. The ECRF is the only Canadian facility of its kind, where researchers can draw samples from real flue gas for analysis.

Smith says SaskPower has worked alongside experts from all over North America, many who appreciate the chance to take advantage of a full-scale installation to assess approaches. "Otherwise people have to do tests in a pilot plant facility with some kind of burner that they hope simulates a coal-fired boiler."

Researchers from the Energy & Environmental Research Centre at the University of North Dakota helped SaskPower develop potential technologies to extract mercury from the flue gas. Powdered-activated carbon was injected into a fabric filter to absorb mercury in the flue gas. Scientists from the University of Regina also worked with SaskPower to determine the compatibility of its mercury capture approach with their carbon dioxide capture process.

Work at the ECRF extends beyond mercury. The facility is also evaluating technology related to carbon dioxide, sulphur dioxide and nitrogen oxides. SaskPower also expects research at the ECRF will further enhance the performance of particulate removal by electostatic precipitators.

"I'd say we're right on the forefront of what's going on in mercury control research right now."

Dave Smith, SaskPower

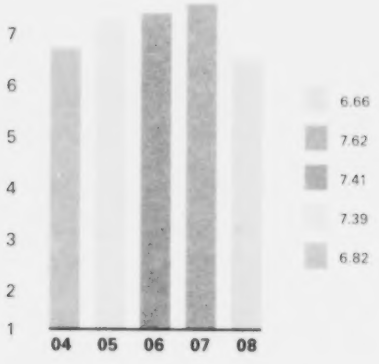
In addition to successfully determining a process to meet SaskPower's need for mercury capture, our company's ECRF test team is exploring methods to reduce other emissions. We continue to improve the efficiencies of ESPs to ensure that the capture of flyash is within design parameters, typically up to 99.5%. In 2006, significant reductions in particulate emissions at Poplar River Power Station Unit #2 were achieved during its major overhaul; in 2007 more particulate collection enhancements were tested and full installation of these is now in progress. Similar improvements are expected for Unit #1 as a result of its major overhaul in 2008. Also, installation of flyash conditioning equipment is planned at the ECRF for 2009 to determine whether the particulate collection efficiency of the ESPs at Poplar River can be further improved.

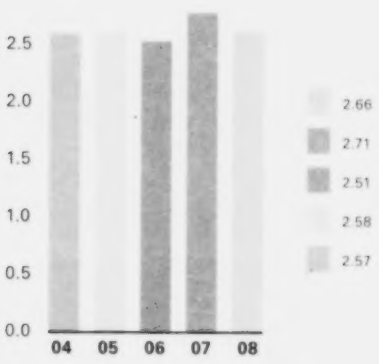
SaskPower is also conducting a multi-year project involving a series of significant mechanical improvements and upgrades for SO_2 at Shand Power Station. Once completed, process optimization and potentially more effective SO_2-control reagents will be studied. While the main driver for this work is to reduce our SO_2 emissions so they are well below regulatory limits, we are also examining options to achieve very low SO_2 concentrations in flue gas in order to accommodate effective CO_2 control. Future regulatory developments will likely require significant SO_2 reductions at numerous coal-fired units [illegible]. SaskPower is assessing recently available technologies to determine the best way to meet these new limits cost-effectively while positioning us to meet any future CO_2-control requirements.

Our company has an ongoing program to investigate ways of achieving lower NO_x emissions by modifying conditions under which coal is burned. Work is also planned at the ECRF in 2009 to determine the suitability of using technology capable of high NO_x reductions on flue gases produced from lignite coal similar to that which SaskPower burns [illegible].

Additional research and development

SaskPower's alliance with a range of partners is also driving technological developments. Our company is playing a leading role in the Canadian Clean Power Coalition (CCPC). The group's aim is to secure a future for coal-fired electricity generation within the context of Canada's multi-fuel electricity industry. The CCPC is proactively addressing environmental challenges through technology development in partnership with governments and stakeholders. Members of the CCPC include Canadian coal and coal-fired electricity producers, the California-based Electric Power Research Institute (EPRI), and Basin Electric Power Cooperative from North Dakota. The CCPC is facilitating





1,000,000

Tonnes of carbon dioxide expected to be captured each year by proposed Boundary Dam Integrated Carbon Capture and Sequestration Demonstration Project.

demonstration plant programs that will lead to the design and construction of clean coal technology power plants by its members.

SaskPower is an industry partner in the International Energy Agency (IEA) GHG Weyburn CO_2 Monitoring and Storage Project. This joint research undertaking with the IEA and EnCana is conducting a world-leading international study that involves injecting and storing CO_2 underground for enhanced oil recovery. To date, results demonstrate that the Weyburn field is highly suitable.

SaskPower is also working closely with the University of Regina's International Test Centre (ITC), which develops technologies to reduce CO_2 emissions. The ITC is establishing Saskatchewan as a world leader in CO_2 capture technology, in part through a $5.2-million pre-commercial scale technology demonstration plant at SaskPower's Boundary Dam Power Station. SaskPower is also a participant in the Canada Centre for Mineral and Energy Technology (CANMET) CO_2 Consortium. Its objective is to advance an oxyfuel process for the capture of CO_2.

SaskPower is a member of the Lignite Energy Council, which includes utilities from North Dakota that burn coal similar in make-up to that used in our generating stations. The council supports the development of technologies that are designed to reduce emissions that result from burning coal.

Southeast Saskatchewan Airshed Association (SESAA)

Established in October 2005, SESAA is Saskatchewan's first airshed association with a mandate to monitor ambient air quality in the southeast region of the province. SESAA is a collaborative group of industry, government, non-government organizations, and private citizens. The airshed covers an area of 36,800 square kilometres and includes 45 municipalities. Major economic activities in the region are agriculture, oil and gas, mining, power generation, and transportation.

During 2008, SaskPower was once again an active member in SESAA on many fronts. In addition to serving on its Board of Directors, monthly SO_2 and NO_2 monitoring information was provided to SESAA from SaskPower's Estevan monitoring station.

Climate change adaptation

Climate change could present a variety of challenges for SaskPower's planning and operations. Our company's ability to take advantage of potential opportunities and effectively manage climate change risks will be dependent on SaskPower's adaptive capacity – the potential to effectively adjust to rapidly changing circumstances. During the year, a workshop was held with key internal planning staff to better understand potential risks and vulnerabilities associated with climate change and identify priority needs for improving adaptive capacity.

Land

Screenings, assessments and project approvals

In order to ensure compliance with all legislative requirements, SaskPower conducts internal screening of generation, transmission and distribution projects using a comprehensive Geographic Information System-based Environmental Screening System (ESS). Developed internally and maintained by SaskPower Environmental Programs, the ESS is widely recognized by both industry and regulators as an exceptional environmental screening tool.

Using baseline environmental and archaeological information compiled from various sources, including government, private and academic sectors, the ESS is employed by SaskPower to identify, prior to construction, any potential environmental, cultural or heritage issues of concern for proposed projects, including:

- Species at risk and important habitat. This includes species that are either provincially or federally protected.
- Areas that may have heritage significance including archaeological sites, sites of a special nature, national and provincial historic sites, heritage properties, and paleontological sites.
- Crown lands administered by the Saskatchewan Ministry of Environment, the Saskatchewan Ministry of Agriculture, or by federal agencies.
- Areas that have legislated protection such as game preserves and bird sanctuaries.
- Areas considered biologically important.
- Private lands that are either protected by conservation easements, listed as organic agricultural land, or are potentially significant habitat.
- Water bodies, rivers and streams, and wetlands.

Project assessment

Projects that have the potential to affect environmentally sensitive lands, habitats or species, or archaeological sites are submitted to Environmental Programs for a detailed assessment. The assessment may determine that legal approvals and permits are required, a field inspection is required, an environmental protection plan must be implemented, or whether other actions are necessary. In 2008, a record 851 projects were referred to Environmental Programs [illegible].

	Referrals					Field assessments				
	2008	2007	2006	2005	2004	**2008**	2007	2006	2005	2004
Generation	2	4	1	0	2	2*	3*	2*	2*	4*
Transmission	31	22	16	9	2	8*	7*	5*	3*	8*
Distribution	800	567	465	526	383	88*	71*	70*	62*	38*
Fiber optic	4	2	4	-	-	0	1	5	-	-
Other	14	24	8	11	5	4	2	0	7	3
Total	**851**	**619**	**494**	**546**	**392**	**102***	**84***	**82***	**74***	**53***

*Includes fieldwork conducted in 2008 for projects referred to Environmental Programs in previous years.

851 **Record number of projects referred to SaskPower Environmental Programs in 2008 for detailed assessment.**

Environmental studies

During a routine archaeological field assessment as part of the SaskPower environmental screening process, a SaskPower employee discovered an undisturbed bison kill site near Biggar, Saskatchewan – the Biggar Bison Pound. Not unlike such famous sites as Wanuskewin or Head-Smashed-In Buffalo Jump, archaeological evidence from the Biggar site indicates that First Nations groups gathered at that location to trap bison many times over the centuries prior to the arrival of European settlers.

With the cooperation of the Biggar District Office personnel, a new route for the SaskPower underground development was chosen that completely avoided the archaeological site. The area is now protected under the Government of Saskatchewan *Heritage Property Act*. By following the process outlined in our ESS, SaskPower was able to help preserve an important part of Saskatchewan history.

In early 2007, SaskPower began the process of planning the construction of a new 230-kV transmission line from the Poplar River Power Station near Coronach to the Pasqua Switching Station near Moose Jaw. Due to the scope of the project, SaskPower and the Saskatchewan Ministry of Environment concluded that this project constituted a development as defined in the *Environmental Assessment Act* and that an Environmental Impact Assessment (EIA) was required. During the year, SaskPower continued to work with consultants to gather information required to complete the Environmental Impact Statement. The program included an on-site investigation program for both environmental and archaeological components.

In 2008, the trend of heightened economic activity in Saskatchewan continued. As a result, SaskPower experienced a continued increase of requests for new connections and service upgrades from all sectors of industry and numerous new transmission lines were taken through the environmental assessment and approval processes.

Site assessments

SaskPower conducts site assessments prior to the sale, purchase or lease of property, or as a result of identification of potential contamination. In 2008, 69 site assessments were carried out [illegible]. The assessments may include the investigation of impacts to soil and ground water of polychlorinated biphenyls, hydrocarbons, metals, soil sterilants, and wood treatment chemicals. If necessary, we initiate site remediation after the assessment has been completed. Treatment and disposal of impacted soils are carried out on SaskPower property, or at local community landfills, registered industrial landfills, or other regulator-approved locations.

	2008			2007		
	Phase I	Phase II	Remediation	Phase I	Phase II	Remediation
Storage yards	1	3	0	0	0	0
Substations	5	11	2	4	7	2
Switching stations	0	0	0	2	3	1
Former/existing power plants	1	1	0	0	3	0
District offices	2	7	0	6	3	0
Pole yards	0	4	1	0	0	0
Vacant land/other	7	7	0	3	3	0
Treatment sites	0	1	1	0	2	0
Mine development	9	2	0	14	0	0
Landfills	2	2	0	0	0	0
Total	**27**	**38**	**4**	**29**	**21**	**3**

An environmental site assessment includes three phases:

- Phase I Environmental Site Assessment (ESA): The process used for the identification of past, present or potential environmental concerns through records review, site visits, interviews, etc. This determines if an assessment (Phase II ESA) is needed.
- Phase II ESA: The process used to characterize and/or delineate the concentrations or quantities of substances of concern related to a site and to compare those levels to criteria.
- Remediation: The process used to remove the impacted contaminant from a site for disposal or treatment.

Vegetation management

Throughout Saskatchewan, we manage over 156,000 kilometres of transmission and distribution lines. In order to ensure the safe operation of these lines, SaskPower maintains vegetation along all power line rights-of-way, which can vary in width from 10 to 70 metres.

We use integrated vegetation management practices to promote the development of low-growing vegetation. As a result, we reduce the possibility of branches or limbs falling across a line during a storm, which can cause damage and interrupt electrical service. In forested areas, if trees come in contact with high voltage lines, they could cause forest fires. Integrated vegetation management combines an understanding of plant ecology with a wide range of management tools to manage vegetation in an effective, economical and environmentally responsible manner.

SaskPower's Vegetation Management Policy ensures that vegetation will be managed in a manner that:

- Incorporates ecological principles;
- Considers community values in establishing standards of maintenance;
- Receives land-owner consent;
- Is cost-effective;
- Uses herbicides responsibly; and
- Complies with SaskPower's Environmental Policy, as well as all relevant federal and provincial legislation and municipal bylaws.

The Vegetation Management Policy includes a number of methods for controlling plant species in transmission and distribution line rights-of-way. It also encourages the establishment of plant species that provide important wildlife habitat. Mechanical methods, the use of seeded and naturally occurring native vegetation, and selective herbicide use are included in the options used by our company. The policy results in economic and environmental benefits because of the lower long-term costs associated with an integrated approach.

In 2008, SaskPower continued to work cooperatively with rural municipalities and individual landowners to maintain a database of organic growers and other landowners who have chosen not to have herbicides used in power line rights-of-way that are on or adjacent to their land.

Wood Pole Maintenance Project (WPMP)

There are an estimated 1.2 million treated wood poles presently in service in Saskatchewan. An Industrial Treated Wood Users Guidance Document, developed under the leadership of Environment Canada, contains recommendations that are designed to minimize the release of specific chemical preservatives. SaskPower's new pole yards will be constructed in accordance with the guidance document. Recycling and reuse options for used poles are also being assessed.

Meanwhile, our WPMP acts as an ongoing test and treatment program that identifies wood poles that have reached the end of their in-service life. The WPMP also identifies wood poles that can have their service life extended through the use of additional pole treatments and reinforcement. Wood pole life extension environmental benefits range from not having to harvest new trees for wood poles to avoiding having to dispose of used wood poles in municipal landfills. By the end of 2008, our company had tested and treated 1.065 million of 1.2 million wood poles while identifying 31,000 wood poles for replacement and 6,600 poles for reinforcement.

31,000

Number of wood poles identified for replacement since inception of SaskPower's Wood Pole Maintenance Project.

Electric and magnetic fields (EMF)

EMF are invisible forces that surround electrical equipment and wires that carry electricity, including power lines. SaskPower continually monitors research into the possible biological and health effects associated with the fields created by electrical facilities to determine whether EMF are in fact harmful. As a member of the CEA, we closely follow EMF research conducted by universities, government and other scientific bodies. Our company also designs and operates electrical generation, transmission and distribution systems to comply with recognized standards, including those issued by the Canadian Standards Association.

SaskPower recognizes that EMF is a complex issue, and it is important to acknowledge and address customer concerns. International health agencies and a large number of independent scientific bodies have been unable to establish from research that there is a health risk from exposure. Scientists and health agencies, however, agree that more research is required to fully resolve the complex technical questions associated with the issue.

Our commitment to the issue of EMF includes the following measures:

- To support employee and public education on EMF;
- Upon request, to provide EMF measurements in and around residential, commercial and public buildings as well as SaskPower facilities, and provide typical EMF readings for common types of electrical equipment;
- To provide estimates of EMF levels for proposed SaskPower electrical facilities;
- To cooperate fully with regulatory agencies established by federal and provincial governments and other electrical utilities to review or consider limits on EMF exposure; and
- To participate in communication forums and regulatory proceedings to remain current on all EMF-related issues.

Spills

Current legislation requires that spills of hazardous substances be reported to regulatory authorities. Legislation defines a spill by type, volume and location. SaskPower had 15 reportable spills in 2008. The impact of these spills was either negligible or mitigated appropriately.

Number of reportable spills

	2008	2007	2006	2005	2004
Oil spills	12	9	12	7	6
PCB-contaminated oil spills (>5 ppm)	0	1	2	2	6
Other spills	3	1	0	6	5
Total spills	**15**	**11**	**14**	**15**	**17**

PCB management

PCBs were used by the electrical utility sector as cooling and insulating fluids in some types of electrical equipment. Today, they remain present as a contaminant in varying concentrations in some of SaskPower's equipment. In 2008, new federal PCB regulations came into effect. SaskPower is required to comply with the associated requirements, which include specifics around reporting, labelling, releases, storage, and end-of-use deadlines. A major challenge during 2009 will be the identification and potential replacement of equipment with high-level PCB concentrations that fall within the new end-of-use deadline parameters.

The former Federal Pioneer Ltd. site in Regina is owned by SaskPower and impacted by PCBs. Our company has completed an environmental site assessment to better understand the extent of impacts. As well, an action plan has been created, which will result in the clean-up of the storage cell in 2009.

Biodiversity

Fisheries

SaskPower continues to work as part of a committee that includes Fisheries and Oceans Canada (DFO), Saskatchewan Ministry of Environment (MOE), and the Saskatchewan Watershed Authority (SWA) to identify and resolve potential *Fisheries Act* issues at our facilities. A 2007-2008 Action Plan, a key deliverable under the Protocol Agreement which was signed by the parties in 2007, outlined actions to be undertaken over the period. The activities were primarily focused on information gathering, data collection and bringing facilities into compliance with the *Fisheries Act* by issuing authorizations where deemed appropriate. Action plan activities were completed and in some cases information gathered allowed consensus on the resolution or removal of an issue from the list of potential concerns.

A 2009-2010 Action Plan has been developed and approved. The plan will involve additional information gathering, with increased focus on facility-specific research activities that will further clarify and/or address prioritized issues at SaskPower facilities.

SaskPower continues to work cooperatively with DFO and other agencies to investigate the fish and fish habitat issues that may be of concern as a result of operations at E.B. Campbell Hydroelectric Station. An aquatic assessment research project that began in 2004 to assess how fish habitat use changes with variations in flow from the station was completed. The final report, with suggested flow recommendations to improve downstream fish habitat, was completed in 2008. The recommendations will be assessed by SaskPower to determine operational implications.

SaskPower continues its engagement with the Canadian Electricity Association (CEA) as it moves forward with DFO under their joint Memorandum of Understanding. In participation with other CEA members, activities in 2008 included a review of DFO's Fish Mortality Position Paper and input into the *Fisheries Act* renewal.

SaskPower was one of the founding members of the Saskatchewan River Sturgeon Management Board (SRSMB) and continues as an active member. The mandate of the group is to prevent the further decline of lake sturgeon in the Saskatchewan River, downstream of E.B. Campbell Hydroelectric Check Station. In 2008, SaskPower provided sponsorship to the sturgeon index fishing program coordinated through MOE and conducted by Cumberland House fishermen. Contributions also funded communication initiatives such as the development of an informational website at saskriversturgeon.ca.

Species at Risk Act (SARA)

As a member of the CEA, SaskPower has been active in providing input into national policy development related to the implementation of *SARA* and has provided input into the five-year review of legislation. In 2008,

In 2008, hydraulic modeling and fish habitat mapping downstream of E.B. Campbell Hydroelectric Station were completed, which provided alternative flow recommendations.

several meetings were held with regulators to discuss concerns around *SARA* implementation and possible solutions. This dialogue is ongoing.

For the third year in a row, SaskPower conducted a piping plover survey at Cookson Reservoir, which supplies water to Poplar River Power Station. Several birds were found once again at this location, resulting in identification of a quarter section at Cookson as critical habitat to the recovery of the species.

Discussions were held in early spring to encourage the critical habitat lessee not to allow cattle access to the area until after the nesting season. SaskPower also funds Nature Saskatchewan's Stewards of Saskatchewan Program, which is an umbrella for four landowner stewardship programs – Operation Burrowing Owl, Shrubs for Shrikes, Rare Plant Rescue, and Plovers on Shore.

Migratory Birds Convention Act (MBCA)

In 2008, SaskPower joined CEA members for discussions with Environment Canada on incidental take regulations and to provide input into regulation development. Work continues with the regulatory consultation process regarding amendments.

In anticipation of *MBCA* regulatory amendments, in 2008 an Avian Protection Workshop was held to provide education and awareness regarding SaskPower impacts on migratory birds and mitigation measures to reduce those impacts. The workshop included presentations around the CEA draft Avian Protection Plan, federal and provincial legislation, wildlife interactions with wind turbines, animal clearances, mitigation measures, perch discouragers, nest management and bird collisions. Discussions regarding SaskPower's next steps will take place in upcoming years.

In 2008, SaskPower also sponsored Nature Saskatchewan's Last Mountain Bird Observatory, which included bird banding and an extensive bird migration monitoring program.

Ducks Unlimited Canada (DUC)

Each year, SaskPower contributes $115,000 to DUC and the initiatives it undertakes to support the conservation of ducks, migratory birds and their habitats. In 2008, the sponsorship was directed to four programs:

- **Conservation Easement Program**

  The protection of existing upland and wetland habitats is identified as a high priority. Conservation easements protect lands that are located in areas where habitat loss has already occurred and continues to occur, primarily targeting native uplands and associated wetlands. This year DUC used the funds provided by SaskPower to secure habitat in two different locations within Saskatchewan:

  Conservation easements in the Missouri Coteau
  The Missouri Coteau is characterized by gently to moderately rolling hills, producing high wetland densities that provide some of the best waterfowl habitat in North America. Given that much of the surrounding land has been broken in the past for annual crop production, these parcels are at risk of being plowed in the future. A total of 264 hectares are being protected.

Conservation easements in the Lightning Creek priority area

The Lightning Creek priority area is situated within the moist mixed grassland ecoregion of Saskatchewan. This land is rated at 40-50 pairs of ducks per square mile and has a predicted breeding density of 10-12 pairs of pintails per square mile (a species of special concern to waterfowl conservation). The majority of the land in the area has been broken in the past, primarily for annual crop production. The remaining native grassland and wetland areas are at risk of loss through breaking and draining. A total of 195 hectares are being protected.

2 **Project Webfoot**

SaskPower sponsorship of this program is allowing for the development of wetland and field resource materials for teachers and the production of interpretive material for existing DUC projects.

Education contractors working in and around North Battleford, Melfort, Saskatoon, Regina, Yorkton, Swift Current and Wadena deliver hands-on opportunities for students to learn about Saskatchewan wetlands in their classrooms or at a nearby marsh or wetland.

In 2008, there were 240 Project Webfoot classroom presentations and 105 field trips delivered by DUC education contractors in Saskatchewan. Through these programs, information on the importance of prairie wetlands was shared with 7,801 students, 510 teachers and teaching assistants, and 360 other adults. Since the program began in 1999-2000, SaskPower funding to DUC has helped provide learning opportunities to over 61,000 children and 6,090 adults.

3 **Forage Program**

DUC is trying to increase forage production in Saskatchewan. Previous programs have focused on converting cultivated land to long-term forage stands. However, there is a growing interest among farmers to use nitrogen-fixing forage in short-term cropping rotations, particularly alfalfa or alfalfa/grass blends. To encourage producers to consider using forages in short-term rotation, DUC works with producers by providing financial incentives to seed a legume as part of their cropping rotation.

In addition, DUC works with producers to develop an on-farm demonstration component that will provide the visual quantitative measurements necessary for producers to make an informed decision on using forage in short-term rotation. In 2008, DUC worked with five producers. Through an agreement with the Tee Two Land and Cattle Co., DUC has secured over 129 hectares for 10 years.

4 **Wetland Restoration Project**

DUC currently has an active wetland restoration program in partnership with landowners. It is provincial in scope and targeted toward areas that will most benefit waterfowl and other wildlife. Wetlands have been drained to increase farmland area since settlement began. According to Environment Canada, in the prairie provinces, many areas have lost up to 70% of their original wetland habitat.

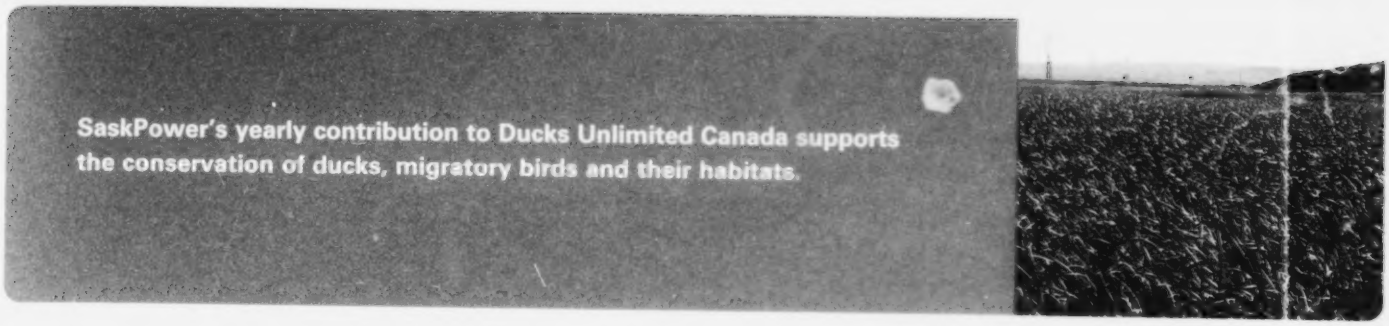
Restoring wetlands, especially where illegal drainage has occurred, has many benefits: runoff control, improved water quality and increased biodiversity. Integrating wetland restoration with other activities on the landscape, such as conversion to forage, can result in benefits such as improved soil and air quality. The installation of earthen ditch plugs that block the drainage has now become a DUC provincial program. In 2008, SaskPower contributed toward the restoration of 88 wetlands.

Zebra mussels

Zebra mussels are an invasive species that can damage ecosystems and water intake structures. In 2008, SaskPower continued to monitor developing zebra mussel issues and undertook zebra mussel monitoring at SaskPower facilities where a higher risk of zebra mussel introduction has been identified.

Partners for the Saskatchewan River Basin

SaskPower partners with this organization to present Saskatchewan Envirothon, which features teams of high school students demonstrating their knowledge



SaskPower's yearly contribution to Ducks Unlimited Canada supports the conservation of ducks, migratory birds and their habitats.

of environmental science, natural resource management and ecology. The two-day competition tests skills in aquatics, forestry, renewable energy, soils and wildlife management through written exams, field tests, and oral presentations. In 2008, 60 students from 12 Saskatchewan high schools participated, with one team advancing to the National Envriothon.

Nature Saskatchewan

In addition to the Stewards of Saskatchewan Program, SaskPower sponsors Nature Saskatchewan's PlantWatch program, through which people across Saskatchewan track bloom times of common native plants. This data enables us to learn more about climate change, GHGs and simple lifestyle changes that can make a difference to the environment.

SaskPower Shand Greenhouse

Since 1991, SaskPower Shand Greenhouse has been using waste heat from the nearby Shand Power Station to grow millions of trees, shrubs and native grasses and plants that have been provided to communities for use in land reclamation and other environmental planting projects. Over 6 million seedlings have been distributed. In 2008, the greenhouse produced approximately 3,000 native plant seedlings for First Nations University of Canada's Regina campus. They were used for the development of a prairie area which features a large medicine wheel made up of plants of specific colours.

During the year, the greenhouse was also recognized for its role in the classroom when it was presented with an award from the United Nations Regional Centre of Expertise for Education on Sustainable Development. The recognition was received for the SaskPower Shand Greenhouse's Energy and Our Environment Program, which deals with issues surrounding energy use, GHGs and climate change. It features a poster contest, classroom presentations and environmental workbooks for elementary students and an e-Clips video contest for high school students. These initiatives combined with regular and school tours reached an estimated 4,000 students in 2008.

Waste

Flyash

Flyash is a fine ash that is a byproduct of burning finely pulverized coal in coal-fired stations. It is sold for use in ready mix concrete, mine backfill, oil well cementing, road base stabilization and oil well site environmental applications. In 2008, SaskPower International had a record-breaking year of flyash sales. Over 130,000 tonnes were sold, equating to a savings of over 130,000 tonnes of CO_2. By selling flyash, we are offsetting the CO_2 produced in the course of cement manufacturing.

Insulating oil

Mineral oil is used as an insulator and coolant in virtually all of SaskPower's transformers and in many other types of electrical equipment. Our company reuses most of the oil, and the remainder is recycled.

Zero G

SaskPower's Zero G Waste Management and Resource Recovery Program raises awareness among SaskPower employees and customers about the goal of zero garbage. Internally, Zero G is in place at SaskPower offices and facilities across the province. One of the main

SaskPower's Zero G Waste Management and Resource Recovery Program includes a variety of recycling programs, including one for fluorescent bulbs from SaskPower facilities.

components of the program is a corporate paper and cardboard recycling program. During 2008, SaskPower recycled 84,027 kilograms of waste paper and cardboard from facilities in southern Saskatchewan.

In addition to paper products, our company has found that many of the items used in operations were not included in existing recycling programs. As a result, whenever possible we are responding by developing new recycling programs – either on our own or in partnership with other organizations. Today, Zero G includes recycling programs for materials such as aerosol cans, oily rags, used oil, solvents, antifreeze, batteries, printer cartridges, phone books, plastic bags, metals and streetlight bulbs. Waste audits are conducted at SaskPower facilities each year to help identify new resource recovery opportunities and to ensure that effective waste diversion methods are in place.

SaskPower also takes Zero G into the wider community and raises awareness about the importance of waste reduction through a number of initiatives:

- Clean Team: This partnership is between SaskPower and the Saskatchewan Association of Agricultural Societies and Exhibitions (SAASE). It helps local community groups across Saskatchewan address waste management and disposal on fair grounds. Additional benefits include waste reduction at local landfills, revenues for local nonprofit groups through honoraria and recycling proceeds, as well as year-round access to SaskPower recycle and refuse bins at exhibition facilities. In 2008, 26,823 bags of trash were collected and 3,399 bags of recyclables were diverted from landfills.
- Saskatchewan Waste Reduction Council: SaskPower supplies financial support to this organization, which delivers public education initiatives, particularly during Waste Reduction Week each fall.
- thINK FOOD: Our company continues to join the Regina and District Food Bank in the thINK FOOD program, which recycles laser and inkjet cartridges from SaskPower's offices as part of a Canada-wide initiative. The program also raises much-needed funds for Saskatchewan food banks.
- Head office waste audit: Students from St. Catherine School in Regina assisted with an annual waste audit at SaskPower's Head Office in 2008, giving participating youth first-hand knowledge of the environmental benefits of recycling and waste diversion.

SHAND GREENHOUSE IN THE CLASSROOM

Educational program gets high grade from United Nations

Shelley Heidinger isn't a schoolteacher. Still, she knows what it's like to stand in front of a room full of students, teach a lesson and not panic when arms fly into the air. As Acting Manager at SaskPower's Shand Greenhouse, she has a great deal of experience taking the facility's Energy and Our Environment Program into Saskatchewan's classrooms. As a result, she knows the greenhouse isn't limited to growing seedlings in the soil, but can also plant seeds in people's minds.

"I think education is important because we are teaching our future customers about managing their energy use and its effects on the environment," says Heidinger. "It's amazing how many children out there are very learned about and interested in the environment."

In 2008, SaskPower Shand Greenhouse's Energy and Our Environment Program was recognized with an award from the United Nations' Regional Centre of Expertise for Education on Sustainable Development. Since 1994, greenhouse staff – and numerous SaskPower volunteers – have been visiting Saskatchewan schools teaching grades five and six students about issues surrounding energy use, greenhouse gases and climate change.

"It adds to my resources unit – it's an excellent presentation and well worth it," says Ken Harris, who teaches at Spruce Ridge School in Estevan. He's welcomed the program into his classroom for 10 years and says he will continue to do so until he retires. Harris points out that kids respond well to the cartoon character Lumi the Light Bulb, who presents topics related to mining, electricity production, the greenhouse effect and how to help make a difference in the environment.

The content is designed to get students and teachers thinking. And Harris says it works long after the presentation is over. "Students will come back and talk about different things they've done at home to be more environmentally friendly."

"It's amazing how many children out there are very learned about and interested in the environment."

Shelley Heidinger, SaskPower Shand Greenhouse

System map

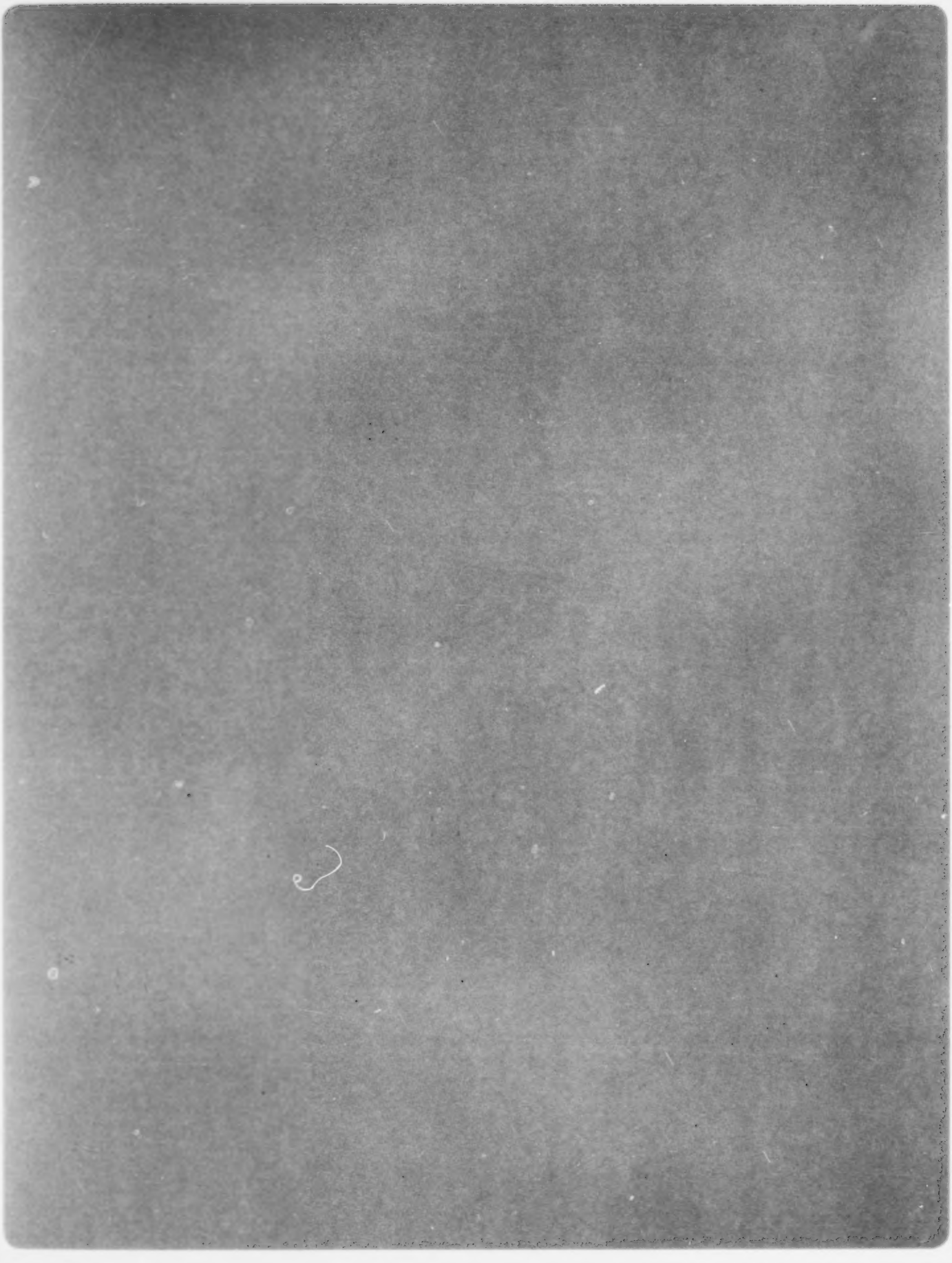
AVAILABLE GENERATION (net capacity)

- Hydroelectric
- Natural gas
- Wind
- Coal
- Independent Power Producer

1. Athabasca Hydroelectric System - 23 MW
   - Wellington (5 MW)
   - Waterloo (8 MW)
   - Charlot River (10 MW)
2. Island Falls Hydroelectric Station - 102 MW
3. E.B. Campbell Hydroelectric Station - 288 MW
4. Nipawin Hydroelectric Station - 255 MW
5. Meadow Lake Power Station - 44 MW
6. Meridian Cogeneration Station - 210 MW
7. NRGreen Kerrobert Heat Recovery Project - 5 MW
8. Landis Power Station - 79 MW
9. Cory Cogeneration Station - 228 MW
10. Queen Elizabeth Power Station - 322 MW
11. Coteau Creek Hydroelectric Station - 186 MW
12. Success Power Station - 30 MW
13. Cypress Wind Power Facility - 11 MW
14. SunBridge Wind Power Project - 11 MW
15. Centennial Wind Power Facility - 150 MW
16. Poplar River Power Station - 582 MW
17. Boundary Dam Power Station - 824 MW
18. Shand Power Station - 276 MW
19. NRGreen Loreburn Heat Recovery Project - 5 MW
20. NRGreen Estlin Heat Recovery Project - 5 MW
21. NRGreen Alameda Heat Recovery Project - 5 MW

TRANSMISSION

- 230 kV
- 138 kV
- 138 kV line operating at 72 kV
- Switching station
- Interconnection



We value your feedback and involvement.
To comment or learn more about our programs and initiatives, please visit us online at saskpower.com or contact:

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Recycled

SaskPower uses Environmentally Responsible Papers. By choosing 100% Post Consumer Recycled fiber instead of virgin paper for the Environment Report, the following savings to our natural resources were realized – Trees Saved: 12; Energy Not Consumed: 9,000,000 BTUs; Wood Saved: 2000 lbs; Wastewater: 4882 gals. (water saved); Solid Waste: 710lbs (landfill reduced); Net Greenhouse Gases Prevented: 1899 lbs.

Above information is based on use of the following products – 503 sheets of Astrolite PC100 Cover white 26 x 40 400m; 4826 sheets of Synergy Smooth 100PCW white 26 x 38 100m; data research provided by www.epa.gov and www.environmentaldefence.org

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